TILGHMAN ISLAND BRIDGE
Spanning Knapp's Narrows
Tilghman vicinity
Talbot County
Maryland

HAER No. MD-108

HAER
MD,
21-TILG.V,
2-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C St. NW
Washington, DC 20240

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TILGHMAN ISLAND BRIDGE HAER No. MD-108

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Location:	Highway spanning Knapp Narrows to Tilghman Island (historic) Chesapeake Bay Maritime Museum entrance road (present)
UTM:	
Date of construction:	1934
Type of structure:	Heel trunion rolling lift bascule bridge
Use:	Transportation across Knapps Narrows (former) Museum exhibit/artifact (present)
Designer/engineer:	Maryland State Roads Commission
Fabricator/builder:	unknown
Owner:	Maryland State Highway Adnministarion until 1999, then Chesapeake Bay Maritime Museum
Significance:	The drawbridge spanning the Knapps Narrows Channel between the mainland and Tilghman Island, Maryland, is significant as a unique engineering type and for its historical and aesthetic connections to Tilghman Island. The bridge, which is eligible for listing in the National Register of Historic Places, has been a landmark in the region and should be preserved and interpreted. Constructed in 1934, it is Maryland's only overhead counterweight bascule span and one of only fifteen moveable bridges throughout the state road network. This type of bridge -- a heel trunion rolling lift bridge with a counterweight suspended above the roadway – was constructed at the Knapps Narrows site because of its ease and speed of operation. The bridge opened approximately 12,000 times a year, more often than most East Coast bridges. In 1995 it was determined that the Tilghman Island bridge would be replaced with a new structure. The Chesapeake Bay Maritime Museum, which for thirty years has served as the leading nonprofit educational institution responsible for preserving the heritage and artifacts of the Chesapeake Bay, moved the bridge to its campus in

St. Michael's and is making it the keystone of the Museum's new entrance road.

Project Information: This report was prepared by the Chesapeake Bay Maritime Museum in 1998. The photography was prepared by HAER while recording another resource in the vicinity of the bridge prior to its relocation. More information related to the bridge can be found at the museum or the Maryland State Highway Administration.

DESCRIPTION OF THE BRIDGE

The Tilghman Island Bridge is a rolling lift bascule bridge, which is characterized by continually changing its center of rotation, and shifting its load application points as the center of gravity moves in a horizontal line. It was designed and constructed by the Maryland State Roads Commission in 1934 as part of the Maryland roads system. As opposed to the other two moveable bridge types in use at the time, lift and swing bridges, this rolling lift bascule was chosen as being most appropriate to the site due to the 75-foot width of the Knapps Narrows Channel which would have made the other types impractical in accommodating maritime and vehicular traffic efficiently. One of the major benefits of the bascule span is how quickly the moveable span opens, thus a boat can pass through the channel quickly, which is particularly important through the Knapps Narrows Channel. Approximately 10 miles of travel is saved by using the channel as a short cut between the Chesapeake Bay and points along the Choptank River, such as Oxford or Cambridge, instead of traveling around the island.

The existing bridge has an overall length of approximately 98 feet and a clear roadway width of 20 feet. The bascule span has an overall length of 77 feet 9 inches and a span length of 54 feet. There is a 15 foot end span on the south approach of the bridge. The bridge is a single leaf, overhead counterweight bascule span with four short steel beam approach spans, all supported on timber piles. For the approach spans, the superstructure comprises steel stringers with a concrete deck. The bascule span is composed of steel girders, beams and stringers with an open steel grating deck. The substructure consists of steel sheet pile bulkheads at the abutments, and a timber pile and cap system supporting the approach and track girder spans.

There is a small frame wood tender's house on the west side of the road at the north end of the bridge. The house is square in plan with one room. Unlike other bridge tender's houses, this building is not physically connected to the bridge.

The superstructure of the bridge is in fair condition. The concrete counterweight has deteriorated and will require restoration or replacement. The bridge also will need to be painted. The primary problems are with the timber pile substructure which will be replaced in the re-installation at the new site.